Honorable Senator John Kissel

Honorable Representative Mary Mushinsky

Legislative Program Review and Investigation Committee

Room 506 Capitol Building

Hartford, CT, 06106

October 15, 2009

Dear Committee Chairs, Representative Mary Mushinsky and Senator John Kissel, and Members of the Committee:

Thank you for the opportunity to express my thoughts on a topic of great interest to me, to you and your Committee, and to the State of Connecticut.

As a consultant for CONNSTEP, I work with a wide range of manufacturers, and witness first-hand their limitations in dealing with materials issues; and, as a director of Olin Corporation's new product and process development activities, prior to employment with CONNSTEP, I was very familiar with Connecticut's economic dependency on materials technology. Materials science is an enabling technology. As an everyday reminder, the silicon semiconductor is made of a material as common as sand, but through a series of very sophisticated processes, it becomes capable of running a computer.

I became a member of the Industrial Advisory Board for the Institute of Materials Science (IMS), because of my belief in its importance to the Connecticut economy. IMS's combination of excellent instrumentation and facilities, its unique structure which encourages various scientific disciplines to work together to address complex problems, and its user friendly infrastructure, that allows easy access by the industrial community, is a special economic asset for Connecticut.

Connecticut is very much dependent on technology for its future growth, and along with this technology it needs infrastructure to bring that technology to commercialization and/or to assist the commercial companies meet their materials challenges.

Manufacturing's impact on Connecticut's economy over the next 10 to 20 years is hopefully going to continue to be substantial, and it will be in large measure because of new products, most made possible by advances in material behavior and materials processing and fabrication. Think about the semiconductor. We can expect similar feats with nanotechnology- based devices in the future. We already have examples at UCONN of new devices capable of monitoring chemistry of body functions and in size so small it can be inserted in the body with a hypodermic needle. Thanks to the Nanobionics Device Fabrication facility at IMS, other important discoveries will be forthcoming.

IMS offers the opportunity to Connecticut companies to participate in this new technology in the next wave of new product developments in energy, healthcare, transportation, and other industry segments. There are no companies in Connecticut capable of investing continuously in the instrumentation and

facilities required for nanomaterials exploration. A strong IMS with its already proven outreach infrastructure is capable of providing that support to Connecticut's manufacturing community.

It is perhaps still too early in the day for much of the manufacturing community to recognize the potential or to engage in strong pursuit of nanotechnology, but they will need the capability IMS has in this technology in place when they awake. Connecticut as a state needs to make sure that IMS has the resources that will continue to keep it at the forefront of this technology--- as the legislators so wisely decided recently. Unfortunately economic constraints precluded the funding. But in fact we cannot afford not to support this activity. IMS is an important economic support system for Connecticut's future.

I know the IMS system works because I have guided several CONNSTEP clients to IMS to help resolve their materials problems, and I know some of the Associate Members of IMS that are also CONNSTEP clients have benefitted from the association.

Thanks to you and the Committee and the investigators for engaging the important issues that confront Connecticut's growth. I hope you will build on the work begun in the Governor's Plan for economic development.

Sincerely yours,

Jack Crane

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